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STATISTICAL BULLETIN

METROPOLITAN LIFE INSURANCE COMPANY

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The Man Who Kills

WHO ARE the murderers? What do we know about the characteristics of those who commit the 12,000 homicides which occur each year in the United States? How many are men; how many are women? From what racial heritage have they come? Are they native or foreign-born, or the native-born children of foreign parents? In what surroundings have they spent their childhood? Do they come from certain local areas such as a few congested centers of population, or are they distributed broadcast throughout the country? How much schooling have they had? Are they graduates of our public schools, our high schools, or our colleges? From what economic stratum of our society do they come? Are they descended from a vicious and defective stock which would make criminal records inevitable? Are they the products of our slum areas? Do they possess long criminal records, with murder the last and most serious offense of a series of social depredations, or is murder their first infringement of our moral code? What, in short, is their heredity, their racial background, the early influences that have molded their character, the environment in which they have grown up, the education they have obtained, the occupational opportunities that have been open to them? These questions demand an answer if we are to make any progress in altering the record which today marks the United States as the country in the civilized world where human life is cheapest.

Unfortunately we have little information about any of the points we have raised. Only here and there are data available which throw light upon the slayer, and these are insufficient to present any clear-cut picture of the group. Consequently, we have attempted to piece together such shreds of information as will make a composite for guidance in understanding these criminals. Studies of limited groups indicate rather clearly that the slayers are almost entirely confined to men. Negroes are found in numbers out of all relation to their proportion in the population. Contrary to prevailing opinion these murderers are not, for the most part, in the very early years of adulthood. In several studies the largest single group was in the age period 25 to 34 years. Few of them have had the benefit of a good education, only a relatively

small percentage having gone beyond the elementary school. Laborers, factory operatives, and skilled workmen formed more than 60 percent of the total in one recent investigation.

The question of nativity cannot be definitely answered at this time. In New York State a predominantly large proportion of those convicted of homicide were foreign-born. Throughout the United States as a whole, however, this does not appear to be the case. The Wickersham Commission, for example, after a careful scrutiny of the available facts, concluded that "In proportion to their respective numbers, the foreign-born commit considerably fewer crimes than the native-born . . . . . [but] approach the record of the native white most closely in the commission of crimes involving personal violence"; and the statistics advanced in proof of that statement show that the homicide record of the native white male is worse than that of the foreign male.

Confirming this finding are the official government figures of prisoners in State and Federal prisons and reformatories. In 1930 the rates for male prisoners charged with homicide, were 4.6 per 100,000 population 15 years and over for native whites and 3.0 for foreign whites.

As significant as the factor of nationality is the question of the previous criminal history of the offenders. Have these murderers been guilty of a series of crimes growing progressively more serious, or is this the first time they have presented a social problem? In 1927 there were 2,325 commitments to the State and Federal prisons and reformatories on the charge of homicide, 2,173 persons being men and 152 women. Of this number, 1,205 prisoners were termed first offenders. But, unfortunately, there is no information as to previous commitment for many prisoners. Considering, therefore, only the records that are complete, we find that 75 percent of those admitted on the charge of homicide are classed as first offenders. Homicide had apparently been the first criminal act of 74 percent of the men and 90 percent of the women. In contrast, first offenders form only 57 percent of those admitted on all charges. In close agreement is the finding of the Illinois Crime Survey that only 26 percent of the total number of murders in Cook County were the work of professional criminals; of these a still smaller number were termed "gang killings."

These few facts, although far from conclusive, seem to indicate that the slayer is not, on the whole, the product of a long training in crime and that acts of passion—brawls, altercations, jealousy, domestic difficulties, etc.—play a far larger rôle than is commonly believed. In short, personal animosities of various kinds are very frequently causative factors culminating in murder.

The gaps in our information are so vast and the data available so incomplete that the subject demands further investigation. Of its importance there can be no question; because assuredly we are working in

the dark when our picture of the type of person who kills is as hazy as the one we have just sketched. The social scientist could make few more valuable contributions to human welfare than to clarify the issues behind murder. Only after we have more accurate knowledge of the constitutional make-up of the murderer, the environment in which he flourishes, and the motives that actuate his conduct, will we be able to devise any method of preventing needless slaughter of useful citizens.

Mortality Experience of the First Three Months of 1935

HEALTH conditions in the first quarter of 1935 among the many millions of Industrial policyholders of the Metropolitan Life Insurance Company have been very satisfactory. They give good ground, in fact, for the hope that the current year will set a new record for low mortality in this important cross-section of the American and Canadian populations.

The death rate for this group of insured wage-earners and their dependents was only 9.4 per 1,000. This marks a drop of 2.6 percent as compared with the figure for the first quarter of 1934; and 1934, in turn, was the record health year of all time in the wage-earning population of the two countries. There is no evidence in this experience of any ill effects of the trying economic conditions through which the people are passing.

Inspection of the tables on pages 5 and 11 brings to light many favorable, and a few less satisfactory, items in the health record of the first quarter of this year.

Tuberculosis

There is, first, the tuberculosis death rate. The decided downward trend of past years is continuing this year. The drop in the mortality rate for white and colored policyholders combined, as compared with that for the first quarter of 1934, is 5.1 percent. Past experience has shown that the tuberculosis death rate for the first quarter of the year is much higher than that for the completed year. In 1934, for example, the first quarter figure was 5.2 percent higher. If a like difference is found at the end of 1935 the year will close with a tuberculosis death rate of approximately 56 per 100,000—a drop of 26 percent in the brief space of five years. Among insured negroes the decline is smaller, indicating clearly where more intense effort in the anti-tuberculosis campaign is called for. The situation today among these people is very similar to what it was among white workers about 20 years ago.

Deaths from Communicable Diseases of Childhood Decline

Each of the four principal communicable diseases of childhood is causing fewer deaths than in the January-March period of 1934. So far this year diphtheria has the

lowest mortality rate of the four, which is good evidence that diphtheria is rapidly approaching the point of complete control. There must be no let-up in the campaign of immunization of young children if such a signal victory is to be won.

Drop in the Mortality from Degenerative Diseases

In recent years we have observed a pronounced slackening in the rise in the mortality from cardiac disease. The current year has actually started with a considerable drop, not only for heart diseases but for the two other principal degenerative conditions, cerebral hemorrhage and chronic nephritis. Both white and colored policyholders have shared in this decline. Other diseases to show more or less lower death rates than for the first quarter of last year are typhoid fever, syphilis, cancer, diarrhea and enteritis, and appendicitis.

No Increase in Deaths from Cancer

The cancer picture is extremely interesting in view of the fact that last year the rise in the crude death rate for this disease was much smaller than had been experienced in previous years; and that, when standardized to make allowance for changes in the age distribution of the insured, there was no rise at all. Later 1935 cancer mortality statistics of the Metropolitan Industrial policyholders will be awaited with unusual interest, as they will constitute the earliest possible index of whether the crude cancer death rate has reached its peak.

Higher Death Rates for a Few Diseases

The only important diseases to show markedly higher mortality rates than those of a year ago are influenza and coronary disease. In neither case is a serious situation reflected. The influenza death rate, despite its rise, is below the 5-year average for the winter season, and the increase has not been accompanied this year by higher pneumonia mortality. The rise for coronary disease is largely—possibly entirely—ficititious, and merely reflects a growing tendency on the part of physicians to certify coronary embolism, or coronary thrombosis as the cause of death in cases where diagnosis is extremely uncertain when based on clinical symptoms alone. A very slight increase in puerperal deaths in all probability reflects the recent increase in the number of births which is being noted so far this year.

Alcoholism Death Rate No Higher

The death rate from alcoholism (2.3 per 100,000) remains substantially the same as for the first three months of last year (2.4).

Suicide Trend Now Downward; Homicide Increases Slightly

The suicide death rate reached a peak in 1932, and since that year has shown a decided tendency to decline. The drop, as compared with the figure for the first quarter of 1934, amounts to 11.5 percent. We must go back to 1929 to match this year's figure. A small increase in homicide is in evidence this year.

Fewer Automobile Accidents

The rate for accidental deaths dropped 3.1 percent and that for automobile fatalities 6.0 percent as compared with the figure for the January-March period of last year. The decrease in automobile fatalities may have been due, in part, to the unfavorable weather conditions of last winter which served to lessen both the volume of motor vehicle traffic and the chances for accident.

Death Rates per 100,000 Persons Exposed. First Quarters of 1933, 1934, and 1935 Compared. By Color for Principal Causes of Death. Metropolitan Life Insurance Company, Industrial Weekly Premium-Paying Business.*

Causes of Death	Death Rate per 100,000 Persons Exposed*					
	White			Colored		
	Jan.-Mar. 1935	Jan.-Mar. 1934	Jan.-Mar. 1933	Jan.-Mar. 1935	Jan.-Mar. 1934	Jan.-Mar. 1933
Total—All Causes	865.9	887.4	897.3	1530.6	1602.0	1586.9
Typhoid fever	.3	.8	.8	.4	2.2	1.3
Measles	2.8	3.8	1.8	1.5	1.3	.2
Scarlet fever	3.7	4.1	4.0	.8	1.3	1.8
Whooping cough	3.2	3.9	3.0	3.6	5.1	.7
Diphtheria	2.7	3.0	3.0	1.0	1.1	1.3
Influenza	27.9	16.8	48.0	68.7	47.3	94.2
Meningococcus meningitis	1.8	.8	1.8	3.1	1.1	2.7
Tuberculosis (all forms)	46.4	50.0	54.5	157.7	160.9	177.5
Tuberculosis of respiratory system	42.7	44.1	49.4	141.1	143.4	159.4
Syphilis, locomotor ataxia, and general paralysis of the insane	7.1	8.6	8.2	48.1	45.5	52.3
Cancer (all forms)	96.1	95.7	92.2	98.5	104.1	97.3
Diabetes mellitus	28.2	27.5	27.9	28.3	31.5	30.6
Alcoholism	2.1	2.0	2.4	4.0	5.1	2.2
Cerebral hemorrhage; apoplexy	59.9	64.6	64.3	125.8	132.5	132.8
Diseases of heart†	171.3	180.4	172.5	272.1	312.1	297.9
Diseases of the coronary arteries and angina pectoris	37.0	33.1	25.9	28.3	27.3	24.8
Pneumonia (all forms)	91.8	91.2	92.1	185.2	188.9	156.0
Bronchopneumonia	36.6	34.7	37.9	58.2	54.2	45.7
Lobar and undefined	55.2	56.5	54.2	127.0	134.7	110.4
Diarrhea and enteritis	5.8	7.0	6.8	6.1	8.2	6.2
Appendicitis	10.5	12.2	11.7	16.2	12.9	10.6
Cirrhosis of the liver	7.7	8.5	7.6	9.4	8.4	8.2
Acute nephritis	2.2	3.0	2.1	10.5	10.0	10.9
Chronic nephritis (Bright's disease)	57.6	63.6	63.6	139.6	148.5	148.1
Puerperal state—total	9.4	9.3	9.5	15.7	14.7	16.8
Total external causes	63.7	65.1	62.4	96.2	109.0	94.2
Suicides	8.9	9.9	10.6	5.2	6.9	9.3
Homicides	3.0	2.8	2.9	28.3	27.5	27.7
Accidents—total	51.8	52.3	48.9	62.6	74.6	57.2
Automobile accidents	18.2	19.6	16.9	22.9	22.4	17.1
All other diseases and conditions	126.7	132.3	131.0	209.6	222.9	218.3

*The rates for 1935 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†Excludes pericarditis, acute endocarditis, and acute myocarditis.

Sources of Information in Vital Statistics

THE live interest which questions of public health and vital statistics have for practically every intelligent person is exemplified by the great number of enquiries that reach the Statistical Bureau of this Company every day. These questions cover an extraordinarily wide range. Here is a sample:

What is the relative mortality of single and of married women? How many deaths occur among children from playing with matches? What proportion of the population of the United States is 65 years old and over? What is the annual death toll in the United States from accidents at grade crossings? What has been the historical trend of longevity in the principal countries of Europe? How does the mortality of certain professional groups, such as teachers or physicians, compare with that of the general population? What are some of the most hazardous occupations? How much time is lost from work annually by sickness per person in the United States? How risky is aviation? What is the average age of men and of women at marriage?

The steady stream of enquiries thus received is an indication of the real interest of the general public in topics relating to life and welfare. In no small measure this inquisitive turn of mind is, no doubt, fostered and encouraged by the modern system of health education through school, college, and the press.

Another step forward in this education would be to disseminate more generally, knowledge of the sources from which questions of this kind can be answered, in so far as they can be answered at all. Teachers in the field of hygiene and allied subjects are, no doubt, acquainted with some of the main sources of such information, and are in a favorable position for making these more generally known. The BUREAU OF THE CENSUS, at every decennial census, publishes a series of volumes on population, available at any of the larger public libraries, giving such data as the total population of the United States classified by color, sex, and age, as well as by a number of other characteristics. The same Government Bureau publishes annually a Mortality Report and a Report on Births, Stillbirths, and Infant Mortality. The former gives details of deaths in a classification somewhat similar to that of the population census, so that death rates in various categories can be calculated for a census year, and, by suitable population estimates, for intercensal years. For information of an immediately current character on mortality, a pamphlet entitled Weekly Health Index, published by the Bureau of the Census and based on the records of 85 cities, may be consulted. A very useful general summary of the situation in the United States will be found in another booklet issued by the same Bureau, *Introduction to the Vital Statistics of the United States*, by W. F. WILLCOX.

The DEPARTMENT OF LABOR has published studies on occupational mortality and industrial accidents. Data on railroad accidents are brought out annually by the INTERSTATE COMMERCE COMMISSION, and similar data on mine and quarry accidents by the BUREAU OF MINES of the Department of Commerce. Aviation accidents are covered by a special BUREAU OF AIR COMMERCE of the same Department. A series of Weekly Reports, published by the UNITED STATES PUBLIC HEALTH SERVICE, gives current statements on Communicable Diseases in the United States and on a selected group of quarantinable diseases in foreign countries. An important feature in these reports are special studies on a great variety of medical and public health subjects.

Aside from Federal sources of information, each State, and all the greater cities, issue from their Departments of Public Health various official printed and mimeographed pamphlets which can be obtained for a small fee, or in some cases free of charge. These more local reports sometimes go into greater detail as regards, for example, the prevalence of sickness, than do the Federal reports. In this connection, however, it is apropos to observe that statistics of sickness are necessarily very limited, because only some 30 or 40 diseases are commonly reportable, and of these many are numerically unimportant, and owe their inclusion in the list merely to the fact that they are communicable, as for example, plague, cholera, or typhus. Moreover, even of the "reportable" sicknesses, often only a fraction are actually reported. And outside of communicable diseases, systematic official statistics are entirely lacking, though a few studies on the prevalence of chronic sickness, for example, have been made.

Aside from government reports of a general character, as well as others of more special scope, there are a great number of publications issuing from private institutions or organizations. So, for example, the appalling waste of human life and limb in the United States through avoidable accidents was the reason, more than two decades ago, for the formation of the NATIONAL SAFETY COUNCIL, an organization dedicated to the elimination of all accident hazards in the home, in the workshop, and on the public highway. One of the functions of this Association is the collection, analysis, and dissemination of statistical information. Their annual publication *Accident Facts* brings together a mass of information, obtained from many sources, bearing on the extent of fatal and non-fatal accidents.

An ideal position for the collection and analysis of health and vital statistics is enjoyed by the large life insurance companies. The Metropolitan, with its many millions of policyholders, in the regular routine of business keeps account of all the deaths taking place in this body of persons, representative as it is of a large part of the population of the United States and Canada. The findings at the medical examination

of applicants for insurance, especially when regarded in conjunction with records of subsequent deaths, form another important source of information available in the Company's files. The results of studies based on these materials have been published widely, not only in this BULLETIN, but in separate monographs, in articles in the medical and technical press, and in several larger works in the form of bound volumes. In their more popular aspects the results of such studies have been widely discussed in the daily press and in magazine articles.

From such sources as have been mentioned, and from others which lack of space prevents us from quoting at length, many of the questions addressed to the Statistical Bureau are answered as a matter of routine. Some questions, however, cannot be answered at all. This is not as trivial a statement as it may at first sight appear. It sometimes requires special knowledge of the classification employed in published statistics to determine whether they can yield the answer. A case in point is one of the sample questions cited in the opening paragraph, regarding the number of deaths caused by children playing with matches. The rubric of deaths by accidental burns is not further subdivided in the federal statistics. In the compilation made currently by the Statistical Bureau of the Metropolitan Life Insurance Company under the general heading, "Accidental Burns", a separate item for burns from matches is recorded. The data are further subdivided by age of the victim. Thus the question regarding the deaths of children from burns by matches cannot be answered on the basis of federal statistics, but pertinent data are available in insurance statistics.

It is quite impossible in these pages to do more than hint at the documentary material stored in our public libraries, and available from Government sources, from which information of the kind here discussed can be extracted. The purpose of this article must perforce be restricted to the encouragement of teachers and others interested in this field, to make themselves familiar with at least the outstanding sources from which the answers to questions of the kind here considered must be drawn. A brief survey of the principal documentary sources of information on vital statistics and public health would be a very worth-while part of the curriculum for teachers, especially those preparing to teach these or allied subjects.

How Many Identical Twins Are There?

JUST about one third of all twins born are of the "identical" kind, in which the two individuals of the pair, being developed from a single ovum, resemble each other to the point of being almost indistinguishable. The other two thirds are "ordinary" twins, developed from two separate ova; among these resemblance is no greater than among

other brothers and sisters. With a total of something less than two million twins of all kinds, this would mean that in the total population of the United States there would be about 600,000 identical twins. Thus, one person out of about every 200 has a living "double."

The evidence on which the estimate of the proportion of identical twins is based is necessarily indirect, for direct statistics on this point are not available. The estimate is arrived at by taking advantage of the fact that identical twins are always of the same sex, while ordinary twins may be of the same sex or of opposite sex. The argument and the method of computation is best illustrated by an example. In the year 1930, in the Birth Registration States of the United States, there were born

8,867 pairs of twins—both male
8,513 pairs of twins—both female
8,748 pairs of twins—one male, one female.

Counting up males alone, we find 26,482 boys among a total of 52,256 babies born—that is, a ratio of 0.507; or, as we may say, there is a probability of 0.507 that a newborn child is a boy, and a probability of 1—0.507 = 0.493 that it is a girl. For our purpose it will be quite near enough to say simply, that the chance is one half for a boy and one half for a girl. Now we ask, what is the chance that a pair born shall be a boy and a girl? This question is very much like asking, what is the chance that in flipping two coins we should turn up a head and a tail. The probability of turning up a head at the first throw is $\frac{1}{2}$, a tail at the second $\frac{1}{2}$, and hence the chance of doing both is $\frac{1}{2}\times\frac{1}{2}=\frac{1}{4}$. Similarly, the chances of turning up a tail at the first throw and a head at the second is $\frac{1}{4}$. The chances of turning up a head and tail in two throws is, therefore, $\frac{1}{4}+\frac{1}{4}=\frac{1}{2}$. Similarly, among ordinary twins, the chance of one being a boy, the other a girl is $\frac{1}{2}$. Hence, the number of pairs of twins of opposite sex is one half the number of pairs of ordinary twins. In the case of the births in the year 1930 we see, therefore, that 8,748 is half the number of pairs of ordinary twins. Therefore, the number of pairs of ordinary twins was 17,496. And since there were a total of 26,128 pairs of twins born that year, the balance, namely 8,632 pairs, were identical twins. Thus $\frac{8,632}{26,128}$ or almost exactly one third of all pairs of twins are identical twins, among the twins born in the United States in 1930. Computations for a series of years past give similar figures.

Aside from the obvious popular interest which always centers on the phenomenon of twins, studies on this subject are of very definite scientific interest. Twins form a particularly useful field of observation, because they enable us sometimes to study the influence of two different environments as they react upon two very nearly identical persons. They thus afford an opportunity for examining into the relative importance of environment and of heredity in shaping the life of the individual.

Recent Publications of the Statistical Bureau

DURING the past year the results of several studies of the Statistical Bureau of the Metropolitan Life Insurance Company have appeared in various papers or pamphlets, published by the Company or in scientific or other periodicals. The following list gives the titles of recent publications of the Bureau, available for distribution, which will be sent to interested readers of the BULLETIN upon their request:

1. Progress in Public Health Since 1900.
2. Studies in Diabetes Mellitus: Its Incidence and the Factors Underlying Its Variations.
3. Studies in Diabetes Mellitus: Interpretation of the Variations in Diabetes Incidence.
4. The Health of the Negro.
5. Factors in the Selection of Risks with a History of Gall Bladder Disease.
6. Thou Shalt Not Kill.
7. Does the Press Want Health Statistics?

Erratum

On page 8 of the March issue of the STATISTICAL BULLETIN certain totals are stated as referring to twin pairs, which should have been made to refer to individual twins. The estimates would then read as follows: At the time of the last census, in 1930, there would have been living something of the order of 600,000 individuals born as twin brothers, 625,000 individuals born as twin sisters, and 635,000 individuals born as twin brother and sister. This gives a total of rather less than 2,000,000 twins of all kinds, or about 1.7 percent of the white population of the United States.

Health Record for March 1935

INSTEAD of the usual increase in the mortality rate which we expect in March, that month ushered in a slight improvement in health conditions this year. The 1935 March death rate was 1 percent lower than the figure for February and 6 percent below that recorded for March a year ago. Such important diseases as tuberculosis, diabetes, cerebral hemorrhage, heart disease, and chronic nephritis registered much lower death rates in March than those for the same month in 1934.

The death rate in the general population of the large cities of the United States for the month of March was 12.4 per 1,000 estimated population as against 12.8 in February 1935, and 12.7 in March 1934. Sickness from measles and scarlet fever increased considerably in March, but there were fewer cases of diphtheria, influenza, poliomyelitis, smallpox, and typhoid fever. Comparison with March of last year shows increased morbidity from influenza, measles, poliomyelitis, scarlet fever, and smallpox, together with fewer cases of diphtheria and typhoid fever.

Reports from 25 states show that only half as many cases of influenza occurred in March as in February.

The following table shows the mortality among Industrial policyholders for March 1935; February 1935, and March 1934, together with the cumulative rates for the first three months of each year.

METROPOLITAN LIFE INSURANCE COMPANY

Death Rates per 100,000 for Principal Causes. Weekly Premium-Paying Business in Industrial Department. All Ages (Annual Basis).*

MONTHS OF MARCH 1935; FEBRUARY 1935, AND MARCH 1934.

CAUSES OF DEATH	ANNUAL RATE PER 100,000 LIVES EXPOSED*				
	March 1935	February 1935	March 1934	Cumulative January-March	
				1935	1934
TOTAL—ALL CAUSES	929.1	938.8	988.7	942.3	967.3
Typhoid fever	.4	.3	.8	.3	.9
Measles	3.9	2.5	5.7	2.6	3.5
Scarlet fever	3.3	3.8	4.6	3.4	3.8
Whooping cough	3.0	3.5	5.2	3.3	4.0
Diphtheria	1.9	2.7	2.5	2.5	2.8
Influenza	28.7	32.4	20.5	32.6	20.2
Tuberculosis (all forms)	59.8	55.6	63.6	59.2	62.4
Tuberculosis of respiratory system	53.7	51.1	55.7	54.0	55.2
Syphilis, locomotor ataxia and general paralysis of the insane	10.8	11.2	13.3	11.8	12.8
Cancer (all forms)	97.7	93.4	93.7	96.4	96.7
Diabetes mellitus	26.6	28.3	29.9	28.2	27.9
Cerebral hemorrhage; apoplexy	65.0	71.3	71.9	67.5	72.2
Diseases of heart†	177.4	186.5	198.3	182.9	195.2
Diseases of the coronary arteries and angina pectoris	37.0	35.7	32.2	36.0	32.4
Pneumonia (all forms)	97.1	96.3	108.4	102.5	102.2
Diarrhea and enteritis	6.7	4.2	7.8	5.8	7.1
Appendicitis	11.9	10.7	12.5	11.1	12.3
Chronic nephritis (Bright's disease)	63.7	69.1	74.5	67.0	73.1
Puerperal state—Total	9.2	9.6	10.4	10.1	9.9
Suicides	9.2	8.1	9.7	8.5	9.6
Homicides	5.4	5.3	6.0	5.9	5.6
Accidents—Total	51.8	52.0	52.2	53.1	54.8
Automobile accidents	17.8	16.4	16.0	18.7	19.9
All other diseases and conditions	158.7	156.0	165.0	151.5	157.9

*The rates for 1935 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†Excludes pericarditis, acute endocarditis and acute myocarditis.

Correspondence on the subjects discussed in these BULLETINS may be addressed to: The Editor,

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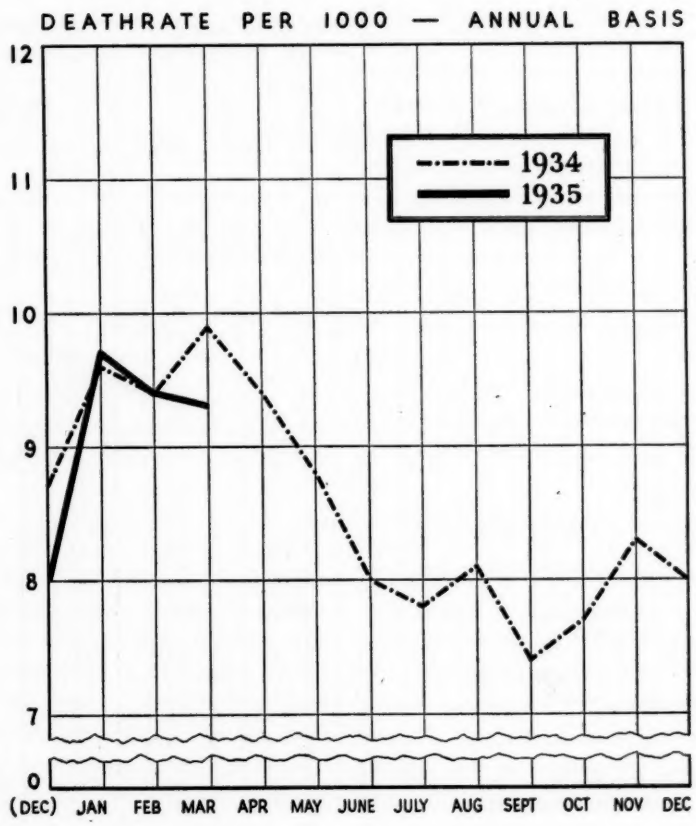
DEATHRATES FROM ALL CAUSES

METROPOLITAN LIFE INSURANCE CO. – INDUSTRIAL DEPT.
WEEKLY PREMIUM PAYING BUSINESS — TOTAL PERSONS



1934	9.6	9.4	9.9	9.4	8.8	8.0	7.8	8.1	7.4	7.7	8.3	8.0
1935*	9.7	9.4	9.3									

** Rates for 1935 are provisional*

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